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FOREIGN TECHNOLOGY DIVISION



PRONOUNCEMENT OF THE MINISTER OF COMMUNICATIONS EDWARD KOWALCZYK ON COMMUNICATIONS TRADE DAY ON THE OCCASION OF "SOVIET SCIENCE AND TECHNOLOGY DAY"



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PRONOUNCEMENT OF THE MINISTER OF COMMUNICATIONS EDWARD KOWALCZYK ON COMMUNICATIONS TRADE DAY ON THE OCCASION OF "SOVIET SCIENCE AND TECHNOLOGY DAY"

Currently going on in our country is Soviet Science and Technology

Day which is an important event and at the same time, interesting. Important in the sense that the Soviet Union exercises a vast and constantly growing economic potential, conducts—conceived on a large scale—scientific research, develops its technology, which in certain areas achieves the highest world—wide level. That is why the possibility of a complex yet at same time a very direct look at the latest achievements in the area of science and technology of our neighbor, and at the same time currently our most important economic partner, has fundamental significance.

The on-going actual exhibition, through its avowed purposeful character for the broad masses of Polish society and not alone for commercial people or scientists, through the presentation in a clear way of the many important problems, is also an interesting exhibition. The achievements of Soviet science and technology join together in Poland with achievements in the area of the conquest of space, the utilization of atomic energy, and the development of aviation. We know Soviet passenger automobiles and trucks, often working with Soviet machines or equipment, in stores we encounter some finished goods of general use with the label "Made in Russia". The Polish press, radio and television often inform us of Soviet scholarly, engineering and technical achievement, but thus information is already at a considerably lessened degree acting on imagination. Thus the significance of the current exhibition lies in that the accumulated displays and photographs on exhibit allow visualization for the average Pole of the USSR share in the performance

of the scientific-technical revolution surrounding our world.

The development of Soviet science and technology is already 60 years old. We are reminded that this falls on the 60th anniversary of the outbreak of the October Revolution. On the other hand, scientific-technical coop between the Council country and Poland has a 30-year old history, for on March 5,1947 a Polish government delegation, traveling to Moscow for several visits signed a series of Polish-Soviet agreements, among others, an agreement for scientific-technical coop. It is proper to emphasize that this understanding was the first of its kind concluded between socialist countries and stood as a model for subsequent agreements in this area.

One can however seek the genesis of the Polish-Soviet agreement before this in the final phase of the war and, in the first years after war's
conclusion the USSR often served Poland--devastated and exhausted by war
activities and the atrocities of the occupation--with deliveries of materials
essential to the restoration of various areas of social life.

This was equally so in the area of communications. Nowadays, it is harder and harder to assemble all the facts from these weighty days, but recollection of their lives among the workers of our department, who at times along with Soviet soldiers or specialists organized the work of the individual divisions of communications, in the end conditioning the functioning of the society and the state.

And here are several facts in this area.

As a result of the visits of the PKWN delegation at the beginning of August 1944 in Moscow, having received technical aid, a special railway car was sent to Lublin with a 10 kW transmitter station mounted which was popularly called "Pszczolka" or "The Bee", which began the first radiophonic broad casting on wavelength 224m on August 11, 1944.

Also, the first broadcast abroad on short wave began at the end of 1944 from Lublin with the aid of a 7.5 kW transmitter presented by the USSR.

A further stage was an agreement for aid by Soviet specialists of April 20, 1945, relating to the construction of a long-save station in Raszyn and Central Radio in Warsaw. The official opening of both these objectives took place on August 19, 1945. At that time there was installed as a gift from the USSR a pre-war 50-kW transmitter which worked on short wave in Raszyn until 1949.

Soviet soldiers aided in the putting into service in 1945 of intercity communication centers. Restored to use as well at this time were cable connections between Warsaw, Radam, Louz and Katowice as well as to other cities in the southern and western portions of Poland.

The great help of the Soviet Union was exhibited in the construction of line broadcasting installations. Immediately after the war line broadcasting was for us the only available system of fast line broadcasting communication in the country, and especially in the non-electrified rural areas. Given by the Soviet Union were the first amplifier sets, speakers and transformers as well as technical documentation enabling the fast development of line broadcasting in Poland.

In the area of telegraphic equipment Poland received from the USSR 350 teletype machines, which enabled establishment of the most necessary cable traffic with the Soviet Union and Czechoslovakia. In 1946 links were already initiated between Warsaw-Moscow and Warsaw-Minsk.

The combined Polish and Soviet forces brought about in June 1945 the establishment of 800 NN manual telephone centers together with a cable net and subsequently on November 25, 1945 there was put into operation in Warsaw the first post-liberation telephone center with a capacity of 5500 NN.

On August 14, 1945 in Wroclaw there was put into operation the first telephone center for public traffic. This center comprised two exchanges of the MB military type with a capacity of 20 NN. Connected to these were 2 intercity circuits to Kalisc as well as Legonica, derived from the cables utilized at this time by the Soviet military.

Within the sphere of Soviet aid we should also speak about the reconstruction of the tele-electronic industry, from where we received many machines and equipment, measuring-control apparatus, stock, materials, sub-assemblies, and technical documentation. In the establishment of the production of communications equipment in Poland, Soviet specialists aided us in the building of factories, the fabrication of finished goods, and the technology of production.

Polish-Soviet scientific-technology coop in the area of communications, originating in the period of its reconstruction from the devastations of the war, grew in the following years, emcompassing more and more new fields.

It is appropriate on the occasion of today's meeting to cite the most important facts of the history of this coop.

In 1953 Soviet specialists designed and completely equipped at this time the strongest middle-wave radiotelephone station in Wola Rasztowska near Warsaw. Equipped with 2 directional antenna systems the station was able to broadcast to this day with a strength of 150 kW two programmes in the middle-wave range. Also to the present time a similar station with a strength of 300 kW operates on the basis of two Soviet transmitters of 150 kW, which commenced its emission on short-wave in 1958 in the region of Poznam.

The immediate technical aid of the USRR for the construction of a television broadcast net appeared in 1956. On April 30 of that year there occured the final opening of the Warsaw Television Center with a transmitter strength of 6.2 kW and of USSR production. Connected as well to the coop with the USSR is the development in Poland of the color television system SECAM.

Recently an area in which cooperation between Poland and the USSR has developed is in satellite communication technique. Poland, like the USSR, is a member -- a founder, beginning in 1971, of the International Organization of Satellite Communications INTERSPUTNIK. As a result of the immediate cooperation with the USSR we have received help in the planning of projects, in the construction and equipping not long ago of a ground communication satellite station in the region of Kielce, employing the center of the ORBITA system for international communications with the member nations of the INTERSPUTNIK organization. The station is adaptable to the transmission of television programming as well as telephonic communications and data transmission. It is appropriate to stress that building in Poland of a satellite communications station is one of the better known examples in the British community of Polish-Soviet coop. Cooperation between Polish and USSR postal authorities has also grown. Its object is, inter alia, the modernization of post offices. A fact that especially serves to underline the transfer/delivery by the Soviet Union of the necessary automatic equipment for postal processes as well as experiences/experiments in the sphere of organization and the system of operations for offices of this kind. The experiments were put to use in the implementation in 1972 of the first experimental self-service postal-telecommunications office in Poland Warsaw. In this office in subsequent years were instituted for travel utilization further modern equipment produced as well by the Soviet Union and other socialist nations. The spread of self-service forms of operation to postal services throughout the nation have been possible thanks to the delivery of essential equipment and technical instruments from the USSR.

Supplied as well was mechanized postal equipment for other functions and technological operations. Worthy of mention as well were the delivery from the USSR of electrical stamping machines, sorting machines, calculators and coin packers, automatic directories, and so on.

Cooperation of operations services over and beyond postal services cooperation can be seen also in the area of teletransmissions.

Already in the initial period of the 50's delivery began from the USSR of teletransmission equipment of twelve fold range system for overhead lines. In the year 1953-1967 24-fold teletransmission equipment was imported from the USSR, first of all the K-24 system, later the K24-2, destined for work on dual-cable lines. Built into this system were two trunk cables, and further to the utilization of the completed equipment of this system there was put into operation a series of groups of range telephony in these relations: Warsaw to Lublin, Bialystok, Katowice, Lodz, as well as from Lodz to Katowice. The equipment of this system also made possible the realization of international communicating, mainly with the USSR, and through teletransmission routes from the USSR to Western Europe. A portion from among the delivered equipment of the above mentioned system has found inself already in use.

Imported from the USSR in the years 1960-73 was the equipment of the K-1920 system making possible the beginning of the building in our nation of a wide-capacity modern telecommunications net, relying on the technology of coaxial cable lines. The first line built in this system in our country is the international trunk line (MllM-l) linking the USSR, Poland, Czechoslovakia and the DDR. This was utilized to service various forms of telecommunications operation (telephone, telegraphic, radiophonic and television), equally in national and international traffic—indeed as well in intercontinental

traffic (i.e from Japan to Western Europe and South America). Within the K-1920 system there was also built a series of essential intercity trunk line nets, which link such administrative-social centers like: Warsaw, Kielce, Kraków, Tarnow, Rzeszów, Katowice, Rybnik, Opole, Wrochaw and Poznan.

Also, Poland supplys to the USSR some communications devices. Among these, inter alia, are C-11 transmitters (RES-14 according to Soviet nomemclature), technologically and in terms of construction, planned by the nations of COMECON (CMEA), especially by Czech., Poland, and the USSR. From 1967, Poland has specialized in the delivery of this transmitter. Until today our country has supplied the USSR for the communications industry 10.650 million units of these transmitters for a sum of over 30 million rubles in foreign exchange. In the current year deliveries have reached 2.5 million units and will continue to increase. Our industry systematically improves the quality of the transmitters.

Next, an important product supplied to the USSR by our country are telefonic apparatus. In the years 1962-1976 inclusive, there were exported 5.2 million general purpose telephone units for a sum of 126.5 million rubles. The supply of these apparatus in 1977 amounted to 700 thousand units, and in future years will annually increase by approximately 12%, similar to the supply of C-11 (RES 14) transmitters.

In the years 1963-1973 the Polish teletransmissions industry delivered to the USSR for a sum of over 11 million rubles in foreign exchange three-channel capacity telephone equipment W-3-3, produced on the basis of Soviet documentation and technical aid.

From 1974 on, Poland supplies to the Soviet Union the equipment of the telephone capacity system TN 12-TK-E for the Ministry of Energy and Electrification. This system was entirely adapted to the requirements of

MINENERGO--USSR, improving the equipment of the line route according to the needs of the Soviet receiver. In the years 1974-1976 inclusive, this equipment was delivered for a sum of 5.4 million rubles in foreign exchange. The current year and in the immediately following years will bring a substantial increase of these deliveries, the value of which in 1977 amounts to 3.1 million rubles in foreign exchange, and in 1978--4.5 million rubles.

From 1972 Poland supplied for the needs of the Soviet Union equipment for dispatcher communications on high tension lines. Furthermore on the subject of this long-term scientific-technical, cooperative and trade collaboration are:

- --dispatch equipment, awared the medal at the INFORGA exhibition in Moscow in 1966 (supplied since 1970);
- --telephone sockets;
- --lamp covers (supplied since 1972);
- --telephone conversation meters (supplied since 1976);
- --telephone sockets and plugs (supplied since 1973,150,000 units);
- --microtelephones for amplifier apparatus (50,000 units, 1970-1973);
- --regional telephone apparatus (1976--19 units);
- --time-zone apparatus.

Recent years have brought a substantial increase in the productive potential of the Polish telecommunications industry and much of its modernization which has broadened the attractiveness of its export tender. Poland is also interested in further import from the USSR of communications means. The result of this mutual interest are negotiated agreements. In September 1975 a specialized agreement for the years 1976-1980 was signed between the Soviet Ministries for Communications as well as for Foreign Trade and the Polish Ministries for the Machine Industry, Communications as well as Foreign Trade and Marine Economy. The intent of this agreement places communications within the authority of the Polish People's Republic with regard to specializing in the production of telephonic transmitters as well as telephone apparatus of general use—there was talk of—whereas the Soviet side—in the production of 4800 DodówJ.

The question of the expansion of the bilateral cooperation between the Polish Ministry of Communications and the USSR Ministry of Communication is reflected in the protocol of the XVIII session of the International Polish-

Soviet Commission for Economic and Scientific-Technical Cooperation. protocol the Commission recommends to the Permanent Working Group of the Polish Ministry of the Machine Industry and the Soviet Ministry for Communications Production at the side of the Polish and Soviet Ministries of Communications the planning by the end of the first half of 1977 the project of agreements relating to the joint planning and production of automatic municipal and intercity telephone centers (intersecting and electronic), provided for the application in the Polish and USSR communications nets. Presently, in Poland there is intense work going on connected to the production of a central municipal telephone system PENTACONTA, adaptable to Soviet requirements. This center with a capacity of 10,000 NN has been installed in the past year in the USSR and given trial use. We hope that the results of the test will be favorable and allow the conclusion of a agreement for multi-year delivery of this type of center to the Soviet Union. The aim of the Polish communications authority in the framework of the further development of cooperation with the Soviet Ministry of Communications Production is the expansion of the relative scope of agreements on specialization and cooperation of production as well as deeper cooperation in the development of commutation techniques with special regard for electronic commutation.

The more than 30-year cooperation of the Polish and Soviet communications authorities encompassed, along with cooperation in operational services and industries, cooperation of scientific-research bases of both nations, equally in the form of bilateral contacts and in the framework of several international organizations. In scientific cooperation on the Polish side, participation occured mainly as individual units such as the Institute of Communications, the Center for Postal Research and Development, and the Center for Planning and Organization of the PPTT Administration(Polish Post, Telegraph and Telephone), while on the Soviet side—the Central Scientific—Research Institute for Communications (CNIIS) as well as the Scientific—Research Radio Institute (NIIR)

Until 1970 Scientific-technical cooperation with the USSR in the area of communications was realized on the basis of work plans of the Permanent Sub-commission for Scientific-Technical cooperation acting with the framework of

the International Polish-Soviet Commission for Economic and Scientific-Technical sooperation. Direct meetings took place as well. This cooperation encompassed mutual trnsfer of technical documentation as well as consultation by specialists. In the framework of documentation exchange received from the USSR, inter alia:

- --technical conditions for telecommunications cables, long-range telephones for stereoflective-aerial isolation in an aluminum casing;
- --technical documentation on measurements of interference in telecommunications lines in the 10-150 kHz band;
- --documentation on mechanized post offices and others.

In this period a broad program of consultation was also realized.

The IX Conference of the Permanent Subcommission on Scientific-Technical Cooperation recommended to the Polish and Soviet Ministries of Communications the signing of a protocal for the negotiation of direct cooperation. This protocol was signed on January 24,1970 in Moscow and was the basis for the drawing up of cooperation plans for separate periods.

Beginning in 1970 the scientific coordination of our autnorities comprised the consultation of Polish specialists in the USSR (i.e., in 1970-75--37 consultations), of Soviet specialists in Poland (same period--19 consultations), the mutual exchange of documentation as well as joint planning on the following themes:

- --establishment of experimental optical communication line, operating on wave-length 10.6 μm, the conduct of its examination and examination of results;
- --elaboration of an interference measure of the type PKZ-7;
- --elaboration of individual technical requirements for a measure of shortlasting interference according to the recommendations of the CISPR:
- --elaboration of the methodology and apparatus for evaluation of reception and transmission of produced telephone apparatus;
- --eleaboration of the recommendations for the achievement and installation of PCM systems and commutation systems with a schedule for maintenance of the PCM and others.

One should remark that in the last years more and more problems in the area of utilization, industry and science, solved formerly in the framework of bilateral

cooperation, are solved now in the form of many international organizations through multilateral cooperation.

Representatives of our spheres of authority and cooperative spheres act together in the international arena within these organizations and their organs such as:

- -- Organization of Communications Cooperation.
- -- COMECON Commission for the Radiotechnical and Electronic Industry.
- --COMECON Permanent Commission on Electrical and Postal Communications.
- -- International Radiophonic and Television Organization OIRT.

Poland and the USSR participated also in the realization in 1966 of an agreement between the Academies of Science of Bulgaria, Hungary, the DDR, Mongolia, Poland, Czechoslovakia, Rumania, Cuba, and the USSR in the undertaking and management of space research generally known by the name INTERKOSMOS.

In the framework of bilateral and multilateral cooperation both of our countries are realizing a complex program of the economic integration of the socialist countries. In the realm of this work, inter alia, we are realizing the periodic undertaking labelled Mutually Related Automatic Complex Communications Networks (WAKSS). All recapitulations are always connected with the risk that not everything of value is represented. With certainty therefore this short characterization of the cooperation of our countries in the area of communications in the postwar period -- does not exhaust the questions. Nonetheless however, even this cursory presentation of mutual cooperation attests to its extensive character. This cooperation, both in its strengthening form as bilateral cooperation, and having its place in the arena of international organizations, should serve the better attainment through the unity of our countries standing before us of general economic and general social tasks.

The role of communications in the USSR as in Poland grows and will grow. Communication is not the sole area of material production, but it is simultaneously the center for exchanges of information, opinions and ideas, a center lessening the distance and tightening people-to-people relations.

In this context one can see our hitherto cooperation and perspectives and its future development.